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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/064,869

08/26/2002

Jeffrey S. Brown

BUR920010223

6165

24241 7590 06/14/2004

IBM MICROELECTRONICS
INTELLECTUAL PROPERTY LAW
1000 RIVER STREET
972 E
ESSEX JUNCTION, VT 05452

EXAMINER

WEISS, HOWARD

ART UNIT

PAPER NUMBER

2814

DATE MAILED: 06/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/064,869	Applicant(s) BROWN ET AL.	
	Examiner Howard Weiss	Art Unit 2814	

-- The MAILING DATE of this communication appears on the cover sheet with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 20 April 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 ~~is~~ are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16 ~~is/are~~ allowed.
- 6) ☒ Claim(s) 1-5 ~~is/are~~ rejected.
- 7) ☒ Claim(s) 6-15 ~~is/are~~ objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Attorney's Docket Number: BUR920010223

Filing Date: 8/26/02

Continuing Data: RCE established 4/20/04

Claimed Foreign Priority Date: none

Applicant(s): Brown et al. (Fried, Nowak, Rainey)

Examiner: Howard Weiss

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/20/04 has been entered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:
 - (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kowalski (FR 2595160) and Wada. (U.S. Patent No. 6,198,151).

Kowalski shows most aspects of the instant invention (e.g. Figures 1 and 2) including:

- first **M1** and second **M2** transfer devices with first, second and gate electrodes
- a single differential storage capacitor with a primary capacitance **CS** and at least two nodes **A,B** in electrical contact with the first and second electrodes of the transfer devices
- inherent capacitances **C1,C2** being at least five times less than the primary capacitance (e.g. Page 4 Line 15)

Kowalski does not explicitly show the transfer devices each having body regions including channel regions and said first and second electrodes being diffused. Wada teaches (e.g. Figure 1) to have transfer devices **Tr1,Tr2** each having body regions **102** including channel regions and said first and second electrodes **111-113** being diffused to operate the device at low voltages (Column 2 Lines 9 to 15). It would have been obvious to a person of ordinary skill in the art at the time of invention to have transfer devices each having body regions including channel regions and said first and second electrodes being diffused as taught by Wada in the device of Kowalski to operate the device at low voltages.

In reference to the claim language pertaining to capacitive values substantially reducing differential charge loss, the claiming of a new use, new function, or unknown property which is inherently present in the prior art does not necessarily make the claim patentable. *In re Best*, 195 USPQ 430, 433 (CCPA 1977) and *In re Swinehart*, 439 F. 2d 210, 169 USPQ 226 (CCPA 1971); please see MPEP § 2112. Since the combination of Kowalski and Wada show all the features of the claimed invention, the substantially reduced differential charge loss is an inherent property of Kowalski and Wada's invention.

4. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kowalski and Wada, as applied to Claim 1 above, and further in view of Tashiro (U.S. Patent No. 5,241,211).

Kowalski and Wada show most aspects of the instant invention (Paragraph 3) except for the SOI substrate. Tashiro teaches (e.g. Column 1 Lines 14 to 23) to use SOI substrates to reduce parasitic capacitances. It would have been obvious to a person of ordinary skill in the art at the time of invention to use an SOI substrate as taught by Tashiro in the device of Kowalski and Wada to reduce parasitic capacitances.

Allowable Subject Matter

5. Claim 16 is allowed.
6. The following is a statement of reasons for the indication of allowable subject matter:
A DRAM memory cell as claimed including rails with diffused source/drain regions therein could not be anticipated nor, in combination, be rendered obvious over the prior art of record.
7. Claims 6 to 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

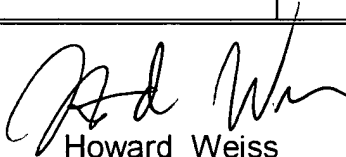
8. Applicant's arguments with respect to Claims 1 to 5 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. Papers related to this application may be submitted directly to Art Unit 2814 by facsimile transmission. The faxing of such papers must conform with the notice published in the Official Gazette, 1096 OG 30 (15 November 1989). The Art Unit 2814 Fax Center number is **(703) 872-9306**. The Art Unit 2814 Fax Center is to be used only for papers related to Art Unit 2814 applications.
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Howard Weiss at **(571) 272-1720** and between the hours of 8:00 AM to 4:00 PM (Eastern Standard Time) Monday through Friday or by e-mail via Howard.Weiss@uspto.gov. Any inquiry of a general nature or relating to the status of this application should be directed to the Group 2800 Receptionist at **(703) 308-0956**.
11. The following list is the Examiner's field of search for the present Office Action:

Field of Search	Date
U.S. Class / Subclass(es): 257/297	thru 6/8/04
Other Documentation: none	
Electronic Database(s): EAST	thru 6/8/04

HW/hw
8 June 2004


Howard Weiss
Examiner
Art Unit 2814